

Date: Thursday, 26/06/2008 12:46:02 PM  
 User: Jean-Luc Menard

## Process Sheet

Customer : CU-DAR001 Dart Helicopters Services	Drawing Name : BRACKET ASSEMBLY
Job Number : 39862	
Estimate Number : 10281	
P.O. Number :	Part Number : D3183043
This Issue : 26/06/2008 S.O. No. :	Drawing Number : D3183 REV C1
Prsht Rev. : NC	Project Number : N/A
First Issue : 11 Type : MACHINED PARTS	Drawing Revision : C1
Previous Run : 39862	Material :
Written By : <i>J. Menard</i>	Due Date : 03/07/2008 Qty: 10 Um: Each
Checked & Approved By :	
Comment : Est Rev: Pick: A 04.02.18 New issue KJ/DS	
Est Rev: B Changed Mat Size 08-06-26 JLM Verified By: EC	

## Additional Product

Job Number:



Seq. #: Machine Or Operation: Description:

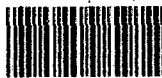
1.0 M174B1500X02250 17-4 SS Bar 1.5"x2.250"



Comment: Qty.: 0.4812 f(s)/Unit Total: 4.8122 f(s)  
 Material: 17-4 SS Bar per AMS 5604/5643  
 (M17-4-B1.500x02.25)  
 Identify for D3183-043  
 Batch: *M108609*

*S.F. 08/07/09* (16)

2.0 BAND SAW BAND SAW



Comment: BAND SAW  
 Cut blanks: (1.500" x 2.000") 5.500" long

*S.F. 08/07/09* (16)

3.0 HAAS1 HAAS CNC VERTICAL MACHINING #1



Comment: HAAS CNC VERTICAL MACHINING #1

1-Machine D3183-3 as per Folio FA322 and Dwg D3183  
 Identify as D3183-3

2-Deburr

3-Scribe batch number

(16)

4.0 QC2 INSPECT PARTS AS THEY COME OFF MACHINE



Comment: INSPECT PARTS AS THEY COME OFF MACHINE

(16)

## Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: BRACKET ASSEMBLY

Job Number: 39862

Part Number: D3183043

Job Number:



Seq. #:

Machine Or Operation:

Description :

5.0

QC8

SECOND CHECK



16

Comment: SECOND CHECK

mk 08/07/16

6.0

D312121

Bolt



Comment: Qty.: 2.0000 Each(s)/Unit Total : 20.0000 Each(s)

Pick:

Qty Part Number  
2 D3121-21

Description Batch  
Bolt B39047 (12)

B3947 (21X)

08/07/17

7.0

D3183045

Bearing Assembly



Comment: Qty.: 2.0000 Each(s)/Unit Total : 20.0000 Each(s)

Pick:

Qty Part Number  
2 D3183-045 Bearing Ass

Description Batch  
B39637 (20X)

B40496 (12X)

~~B40496 (12X)~~

08/07/28

8.0

SMALL FAB 1

SMALL & MEDIUM FAB RESOURCE 1



Comment: SMALL & MEDIUM FAB RESOURCE 1  
Assemble D3183-043 as per Dwg D3183.

08/07/28 (16)

9.0

QC5

INSPECT WORK TO CURRENT STEP



Comment: INSPECT WORK TO CURRENT STEP

08/07/28 (16)

10.0

PACKAGING 1

PACKAGING RESOURCE #1



Comment: PACKAGING RESOURCE #1  
Identify and Stock  
Location: C 8/28 (16)

11.0

QC21

FINAL INSPECTION W/O RELEASE



Comment: FINAL INSPECTION W/O RELEASE

08/07/28

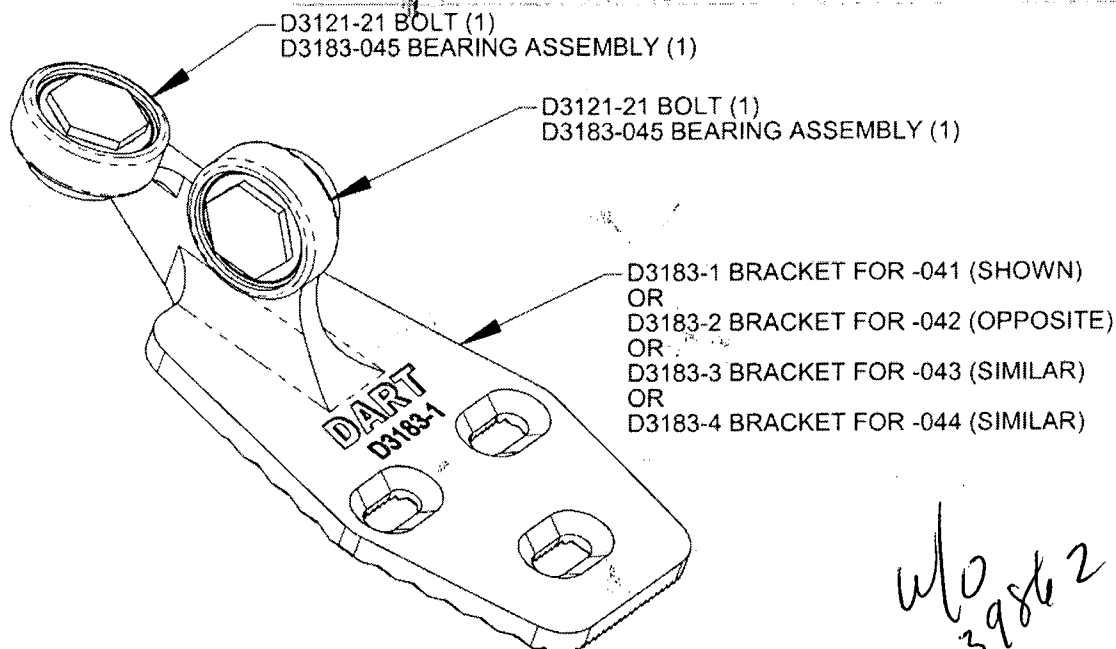
Job Completion



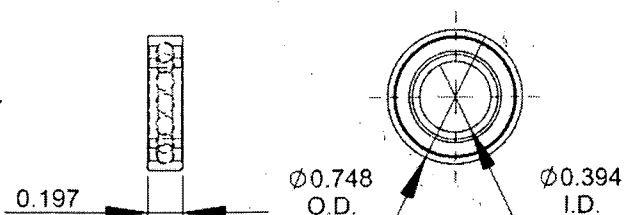
MF 08-07-28

**DART**

DESIGN #	DRAWN BY UP	<b>DART AEROSPACE LTD</b> HAWKESBURY, ONTARIO, CANADA	
CHECKED #	APPROVED #	DRAWING NO. <b>D3183</b>	REV. C SHEET 1 OF 4
DATE <b>04.02.17</b>		TITLE <b>BRACKET ASSEMBLY</b>	SCALE 1:1
A.	03.01.24	NEW ISSUE	
B.	03.06.17	REMOVE BEARING; 1.012 WS 0.882	
C.	04.02.17	ADD -045/-9; 0.182 WAS 0.431	
C1	04.11.09	0.830 WAS 0.850	

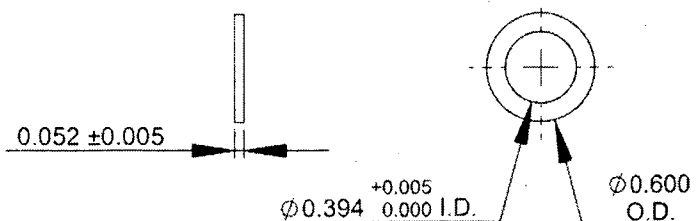
**RELEASED**  
04.03.01

**D3183-041 BRACKET ASSEMBLY (SHOWN)**  
**D3183-042 BRACKET ASSEMBLY (OPPOSITE)**  
**D3183-043 BRACKET ASSEMBLY (SIMILAR)**  
**D3183-044 BRACKET ASSEMBLY (SIMILAR)**



**D3183-5 BEARING:**  
**SPECIFICATION CONTROL DRAWING**

- 1) SINGLE ROW, DEEP GROOVE, CONRAD TYPE, SHIELDED
- 2) POSSIBLE SUPPLIER: NSK P/N 6800ZZ
- 3) ALL DIMENSIONS ARE IN INCHES



**D3183-7 WASHER**

- 1) MATERIAL: AISI 303 ROUND BAR (M303R) ANNEALED
- 2) BREAK ALL SHARP EDGES 0.005 TO 0.010
- 3) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) ALL DIMENSIONS ARE IN INCHES

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W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

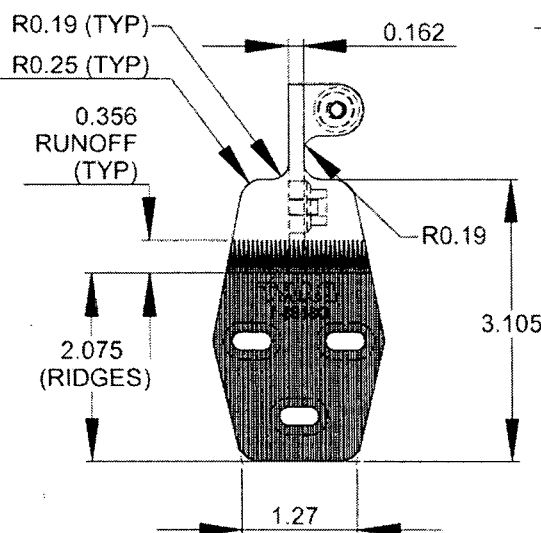
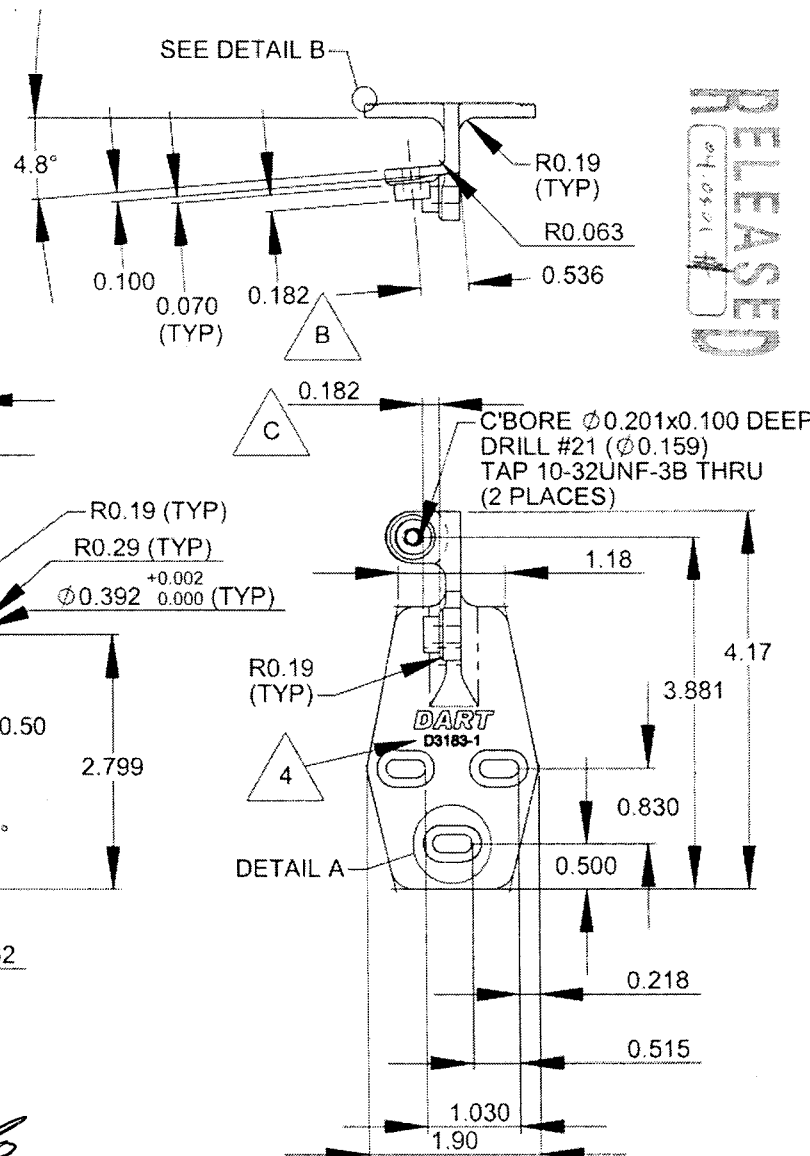
NOTE: Date & initial all entries

**DART**



DESIGN	DRAWN BY	DART Aerospace Ltd
CHECKED	APPROVED	HAWKESBURY, ONTARIO, CANADA
DATE	DRAWING NO.	REV. C
04.02.17	D3183	SHEET 2 OF 4
TITLE	BRACKET ASSEMBLY	SCALE
		1:2

RELEASED  
04.05.01



**D3183-1 BRACKET SHOWN  
D3183-2 BRACKET OPPOSITE**

- 1) D3183-1 CAN BE MADE FROM D3183-3  
D3183-2 CAN BE MADE FROM D3183-4
- 2) MATERIAL: 17-4 SS PER AMS 5604/5643  
(REF DART SPEC. M17-4-B)  
MIN ULTIMATE STRENGTH = 150 ksi  
MIN YIELD STRENGTH = 100 ksi
- 3) BREAK ALL SHARP EDGES 0.005 TO 0.015
- 4) ENGRAVE DART P/N & LOGO AS SHOWN
- 5) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 6) ALL DIMENSIONS ARE IN INCHES

*Wp 39862*

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W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

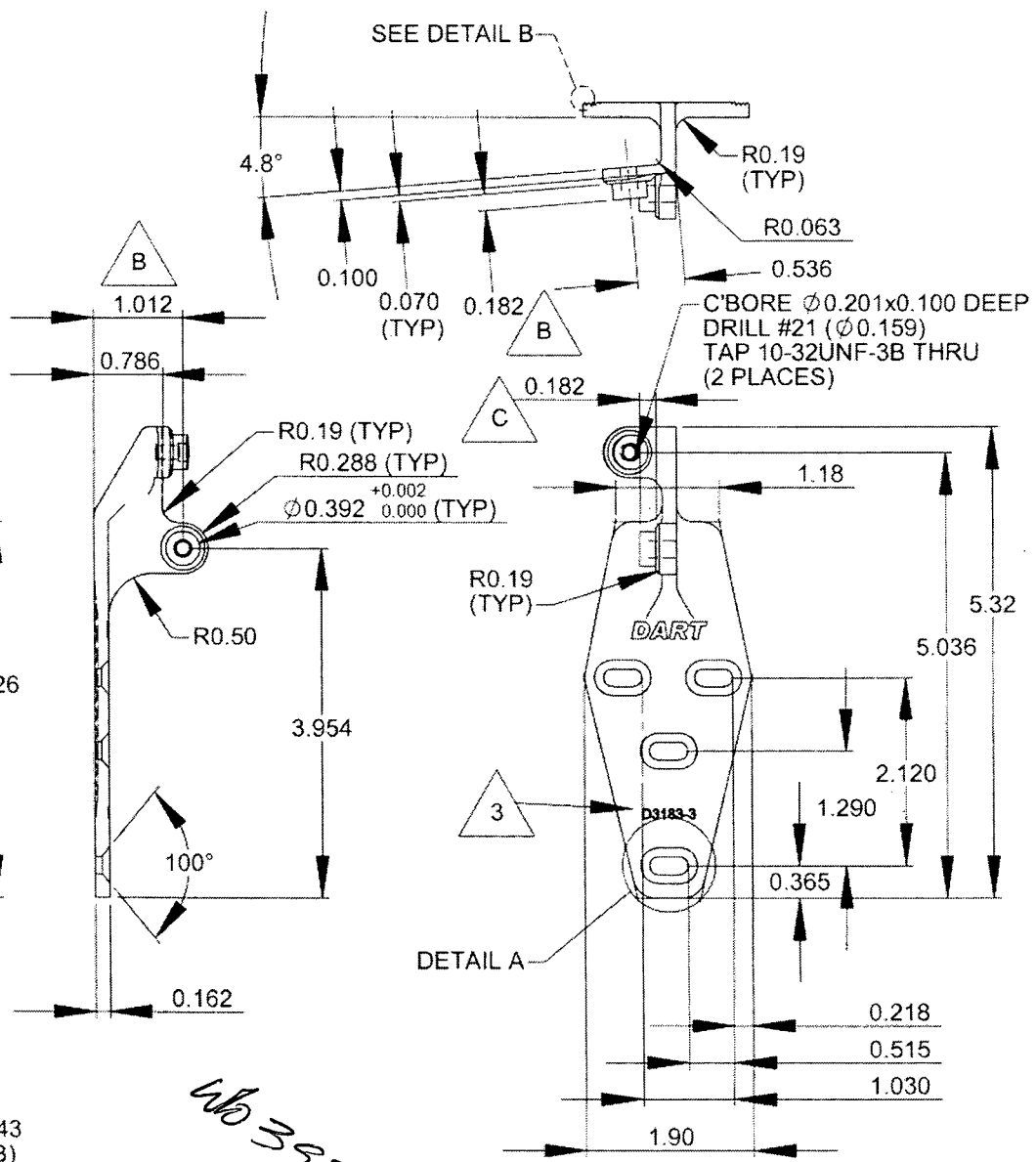
NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

**DART**

UNCLASSIFIED

DESIGN	DRAWN BY	DART AEROSPACE LTD
CHECKED	APPROVED	HAWKESBURY, ONTARIO, CANADA
DATE	04.02.17	DRAWING NO. D3183
TITLE	BRACKET ASSEMBLY	REV. C SHEET 3 OF 4
SCALE	1:2	



*4639862*

D3183-3 BRACKET SHOWN  
(REPLACES BELL P/N 412-030-304-105)  
D3183-4 BRACKET OPPOSITE  
(REPLACES BELL P/N 412-030-304-106)

- 1) MATERIAL: 17-4 SS PER AMS 5604/5643  
(REF DART SPEC. M17-4-B)  
MIN ULTIMATE STRENGTH = 150 ksi  
MIN YIELD STRENGTH = 100 ksi
- 2) BREAK ALL SHARP EDGES 0.005 TO 0.015
- 3) ENGRAVE DART P/N & LOGO AS SHOWN
- 4) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 5) ALL DIMENSIONS ARE IN INCHES

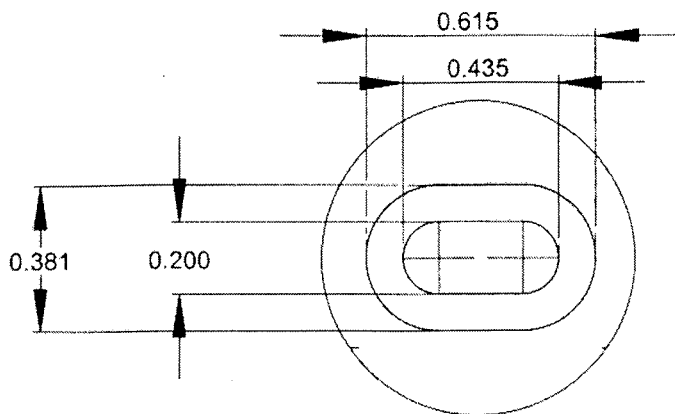
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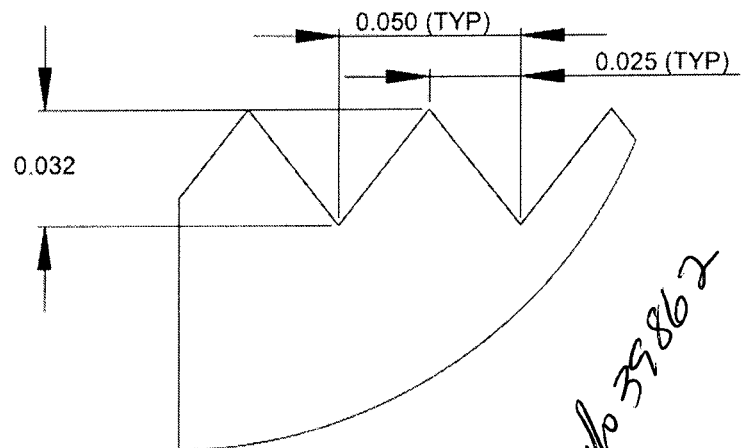


DESIGN <i>[Signature]</i>	DRAWN BY <i>[Signature]</i>	<b>DART AEROSPACE LTD</b> HAWKESBURY, ONTARIO, CANADA	
CHECKED <i>[Signature]</i>	APPROVED <i>[Signature]</i>	DRAWING NO. <b>D3183</b>	REV. C SHEET 4 OF 4
DATE <b>04.02.17</b>	TITLE <b>BRACKET ASSEMBLY</b>	SCALE 1:1	

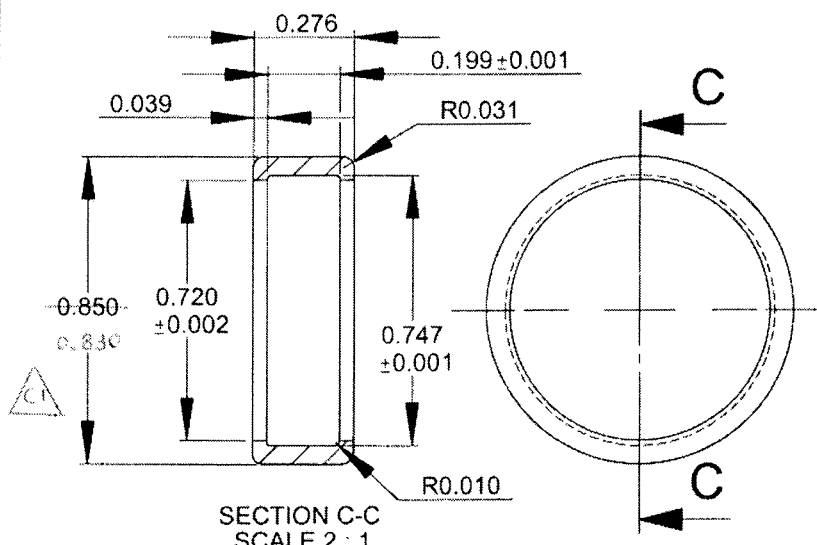


DETAIL A (2 : 1)

RELEASED  
04 03 01



DETAIL B (20 : 1)



**D3183-9 CAP**

- 1) MATERIAL: DELRIN ROD, Ø1.00  
(REF DART SPEC. M-DELRIN-R1.00)
- 2) TOLERANCES ARE PER DART QSI 018  
UNLESS OTHERWISE NOTED
- 3) ALL DIMENSIONS ARE IN INCHES

**D3183-045 BEARING ASSEMBLY**

- 1) ASSEMBLE D3183-5 BEARING AND  
D3183-9 CAP

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<b>DART AEROSPACE LTD</b>		<b>Work Order:</b> 39862
<b>Description:</b> Bracket		<b>Part Number:</b> D3183-3
<b>Inspection Dwg:</b> D3183	<b>Rev:</b> C1	<b>Page 1 of 1</b>

### FIRST ARTICLE INSPECTION CHECKLIST

☒ **First Article**
☐ **Prototype**

Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
R0.190	+/-0.030	.190	✓			
R0.063	+/-0.010	.063	✓			
0.182	+/-0.010	.184	✓			
0.070	+/-0.010	.065	✓			
0.100	+/-0.010	.104	✓			
Ø0.201 x 0.100	+/-0.010	.202	✓			
0.182	+/-0.010	.187	✓			
5.32	+/-0.030	5.310	✓			
5.036	+/-0.010	5.030	✓			
2.120	+/-0.010	2.121	✓			
1.290	+/-0.010	1.289	✓			
0.365	+/-0.010	.364	✓			
0.218	+/-0.010	.210	✓			
1.030	+/-0.010	1.035	✓			
1.90	+/-0.030	1.890	✓			
1.012	+/-0.010	1.017	✓			
Ø0.201 x 0.100	+/-0.010	Ø.197 x .102	✓			
0.786	+/-0.010	.790	✓			
Ø0.392	+0.002/-0.000	.393	✓			
R0.19	+/-0.030	.190	✓			
3.954	+/-0.010	3.955	✓			
0.162	+/-0.010	.164	✓			
R0.19	+/-0.030	.190	✓			
R0.25	+/-0.030	.250	✓			
4.26	+/-0.030	4.270	✓			
2.080	+/-0.030	2.080	✓			
1.155	+/-0.010	1.155	✓			
0.162	+/-0.010	.170	✓			
0.36	+/-0.030	.360	✓			
0.615	+/-0.010	.621	✓			
0.435	+/-0.010	.437	✓			
0.200	+/-0.010	.207	✓			
0.381	+/-0.010	.386	✓			
0.032	+/-0.010	.033	✓			

<b>Measured by:</b> JS	<b>Audited by:</b> [Signature]	<b>Prototype Approval:</b>	N/A
<b>Date:</b> 08/07/12	<b>Date:</b> 08/07/16	<b>Date:</b>	N/A

Rev	Date	Change	Revised by	Approved
A	03.11.12	New Issue	KJ/RF	
B	04.03.15	Changes as per revision C	KJ/JLM/RF	
C	06.03.09	Dwg Rev update	KJ/JLM	
D	08.01.28	0.182 dimension removed	KJEC/DD	

